

material rainfall in this section, and the want of drinking water is beginning to be felt.

Fernandina, Nassau Co., Fla.: nearly a month has passed since any rain fell at this place. The growing crops have been damaged, the cisterns are dry, and the shade trees are drooping.—*The (Savannah, Ga.,) Morning News, May 20.*

Wainright, Charlton Co., Ga., 24th: the drought is having a damaging effect upon the growing crops. Gardens are ruined and vegetation in some places is parched and dry.—*The (Savannah, Ga.,) Morning News, May 25.*

Memphis, Tenn.: the drought which has prevailed in this section since the 1st of the month was broken on the 25th.

Convent, Saint James Parish, La.: no rain fell from the 1st to the 28th, when a storm occurred in the lower half of the parish. The dry weather and the low stage of the Mississippi River have proved very unfavorable, especially to the rice crop, over six thousand acres of which have been abandoned.—*Report of Prof. F. Greene to the Louisiana State Weather Service.*

Hammock, Alachua Co., Fla., 29th: owing to a scarcity of rain there is a heavy loss in the vegetable crop. Sixty-five per cent. will not more than cover the damage. It is about seven weeks since rain fell. The drought has caused a discontinuance of shipping of northern winter cabbage.—*The (Savannah, Ga.,) Morning News, May 30.*

Montgomery, Ala.: crops are suffering severely from drought, and small streams are drying up. A beneficent rain fell on the 29th and 30th, breaking the drought.

Charlotte, N. C.: farmers report that the crops are drying up and that cotton is rotting in the ground. The heavy rain on the 30th broke the drought.

Hammond, Tangipahoa Parish, La.: excepting 0.03 inch of rain which fell on May 25th, there has been no rain since April 13th to May 29th, when 0.13 inch fell.—*Report of Mr. W. A. Reed to the Louisiana State Weather Service.*

Chattanooga, Tenn.: the protracted drought has been very disastrous to crops. The strawberry crop is seriously damaged, and little or no garden produce has been raised. Heavy rain fell on the 29th and 30th, breaking the drought.

Savannah, Ga.: a severe drought prevailed from the 1st to the 30th, doing much injury to crops on truck farms. Total precipitation for the month, 0.35 inch; this is the least on record for May at this station since 1871.

Augusta, Ga.: all crops in this section are suffering from the prevailing dry weather. The rain on the 30th, 0.81 inch, was the first rain of any consequence since the 1st of the month.

Fort Apache, Ariz., 31st: no rain has fallen since April 10th, and the drought is severely felt in this section.

Clinton, East Feliciana Parish, La., 31st: the month has been unusually dry. The rain of the 29th did not extend all over the parish, and the southern and southwestern portions are in need of rain. Grasshoppers are reported as doing some damage to cotton.—*Report of Mr. J. A. White, jr., to the Louisiana State Weather Service.*

Cedar Keys, Fla., 31st: the almost entire absence of rainfall during the month has severely embarrassed the farming interest in this section; cisterns in the city are dry. Records show that the least rainfall in May since the opening of the Signal Service station at this point in 1879 was 0.71, in 1886.

University, Miss., 31st: crops suffered severely from drought during the month, until the 25th; after that date rain occurred, breaking the drought.

Cameron, Cameron Parish, La., 31st: the unusual dryness during the month has damaged vegetation, and has been very unfavorable to the farming interests. The early corn is a failure, and the usual area of late corn has not been planted.—*Report of Hon. S. P. Henry to the Louisiana State Weather Service.*

Grand Coteau, Saint Landry Parish, La., 31st: the total rainfall since February 1st has been but 8.06 inches, of which 0.21 fell during the present month; the average for the same period of former years is 24.60 inches. As a consequence of the prevailing drought cotton rises slowly, and those who are late have not been able to plant. Cisterns commence to fail,

the bayous and ponds are dry, and the cattle suffer on the prairie, where the grass is parched. *Report of Rev. C. M. Widman, S. J., to the Louisiana State Weather Service.*

SUN SPOTS.

Haverford College Observatory, Pa. (observed by Mr. H. V. Gummere):

Date, May, 1889.	Number of new—		Disappeared by solar rotation.		Reappeared by solar rotation.		Total number visible.		Faculae.		Remarks.
	Groups.	Spots.	Groups.	Spots.	Groups.	Spots.	Groups.	Spots.	Groups.	Faculae.	
2, 10 a. m. . . .	0	0	0	0	0	0	0	0	0	0	Definition very good.
4, 12 m.	0	0	0	0	0	0	0	0	0	5	Definition fair.
6, 11 a. m. . . .	1	1	0	0	1	1	1	3	2	15	Definition very good.
7, 12 m.	0	0	0	0	0	0	1	6	1	14	Definition fair.
8, 10 a. m. . . .	0	0	0	0	0	0	1	8	1	9	Definition fair.
9, 11 a. m. . . .	0	0	0	0	0	0	1	8	6	11	Definition good.
10, 10 a. m. . . .	0	0	0	0	0	0	1	7	0	0	Definition poor.
14, 11 a. m. . . .	0	0	0	0	0	0	0	0	1	1	Definition good.
15, 11 a. m. . . .	0	0	0	0	0	0	0	0	2	2	Definition very good.
16, 11 a. m. . . .	0	0	0	0	0	0	0	0	4	42	Definition very good.
17, 9 a. m. . . .	0	0	0	0	0	0	0	0	3	27	Definition very good.
18, 10 a. m. . . .	0	0	0	0	0	0	0	0	1	1	Definition poor.
21, 10 a. m. . . .	0	0	0	0	0	0	0	0	0	0	Definition poor.
22, 9 a. m.	0	0	0	0	0	0	0	0	1	2	Definition good.
23, 10 a. m. . . .	0	0	0	0	0	0	0	0	1	2	Definition very good.
25, 10 a. m. . . .	0	0	0	0	0	0	0	0	5	9	Definition very good.
28, 11 a. m. . . .	0	0	0	0	0	0	0	0	3	9	Definition very good.
29, 11 a. m. . . .	0	0	0	0	0	0	0	0	0	0	Definition very poor.
30, 11 a. m. . . .	0	0	0	0	0	0	0	1	6	6	Definition very good.

Mr. John W. James, Riley, McHenry Co., Ill.: one group of four or five spots was observed on east edge of sun, 6th; vanished between 8th and 10th. No others seen during the rest of the month. Mr. C. E. Bozzell, Leaf River, Ogle Co., Ill., May 5th: a group of spots, surrounded by prominent faculae, appeared by rotation on east limb, south of equator. This group was in a constant state of change, and disappeared on the 9th. Mr. M. A. Veeder, Lyons, Wayne Co., N. Y., May 19th: western faculae disappeared by rotation; extensive faculae, eastern quadrant; 20th and 21st, no observation taken. 22d to 25th, inclusive, faculae only—not bright. 26th to 30th, inclusive, observation poor, faculae only. 31st, no observation.

SHOWER OF FISHES.

Wichita, Kans.: during a thunder-storm which occurred the afternoon of the 10th a shower of fishes, from one to four inches long, fell at the Burton Car Works, four miles north of this city. They covered the ground in thousands. One, brought to police headquarters, was a small catfish about three and three-fourths inches long, such as abound in the streams hereabouts.—*Report of Signal Service observer.*

RAIN FROM CLOUDLESS SKY.

Portland, Oregon, 4th: at 2.10 a. m. rain fell for five minutes in small fine drops, with a perfectly clear sky, and wind blowing at the rate of about one mile per hour.—*Report of Signal Service observer.*

VERIFICATIONS.

The percentages of the official forecasts of the Signal Service for May, 1889, were not completed in time to be published in this issue of the REVIEW.

Percentages of local verifications of weather and temperature signals as reported by directors of the various State Weather Services for May, 1889.

States.	Weather.	Temperature.	States.	Weather.	Temperature.
Illinois	68.8	65.5	Nebraska	83.1	90.7
Indiana	77.1	81.6	New Jersey	77.4	83.2
Kansas	85.6	86.0	New York	84.0	81.0
Kentucky	87.0	84.0	North Carolina	79.1	77.6
Louisiana (Northern)	76.0	84.0	Ohio	81.0	86.0
Louisiana (Southern)	88.0	98.0	Pennsylvania	83.0	87.0
Michigan	72.5	71.8	South Carolina	85.0	80.0
Minnesota	81.0	79.0	Tennessee	88.7	84.6